IN THE CLAIMS:

Please cancel claim 16.

Please amend the claims as follows:

1. A gas treatment apparatus for reducing a hazardous gas content of an effluent from a process chamber, the gas treatment apparatus comprising:

(a) an exhaust tube through which effluent from the process chamber may be flowed, the exhaust tube having an internal flow surface that is substantially absent projections or recesses that alter the effluent flow path; and

(b) a microwave energy applicator to couple microwaves to the effluent flowing through the exhaust tube to reduce the hazardous gas content of the effluent.

4. The gas treatment apparatus of claim 1 wherein the internal flow surface is adapted to provide [exhaust tube comprises a flow surface that provides] a laminar flow of effluent through the exhaust tube.

5. The gas treatment apparatus of claim 4 wherein the exhaust tube comprises a cylinder and wherein the [having an] internal flow surface [that] is parallel to the direction of the flow of the effluent through the exhaust tube[, and that is substantially absent projections or recesses that alter the effluent flow path].

9. The gas treatment apparatus of claim 1 wherein the exhaust tube comprises a distributor plate at an inlet of the exhaust tube, the distributor plate having holes adapted to direct effluent preferentially along the internal [a] flow surface of the exhaust tube.

10. A gas treatment apparatus for reducing a hazardous gas content of an effluent from a process chamber, the gas treatment apparatus comprising:

(a) an exhaust tube through which effluent from the process chamber may be flowed;

(b) a microwave energy applicator to couple microwaves to the effluent flowing through the exhaust tube to reduce the hazardous gas content of the effluent; [The gas treatment apparatus of claim 1 further comprising:]

(c) [(a)] a gas analyzer [for] capable of monitoring the hazardous gas content of the effluent in the exhaust tube and providing an output signal in relation to the hazardous gas content of the effluent; and

(d) [(b)] a computer controller system comprising a computer readable medium having computer readable program code embodied therein, the computer controller system capable of monitoring the output signal from the gas analyzer, and when the hazardous gas content of the effluent exceeds a safety level, performing at least one of the following:

(i) adjusting a power applied to the microwave energy applicator [gas energizer] to reduce the hazardous gas content in the effluent,

(ii) adjusting process conditions in the process chamber to reduce the hazardous gas content in the effluent,

(iii) activating an alarm or metering display,

(iv) adding a reagent gas to the effluent before or after the effluent is energized, to reduce the hazardous gas content in the effluent, or

(v) terminating the process being conducted in the process chamber.

11. A process chamber for processing a substrate and reducing emissions of hazardous gas to the environment, the process chamber comprising:

(a) a support capable of supporting the substrate in the process chamber;

(b) a gas distributor capable of introducing process gas into the process chamber;

(c) a gas activator capable of activating the process gas to process the substrate, thereby forming an effluent containing hazardous gas; and

(d) an exhaust tube through which a continuous stream of the effluent may be flowed; [and]

(e) a microwave energy applicator to couple microwaves to the effluent in the exhaust tube to energize the effluent;

(f) a gas analyzer capable of monitoring the hazardous gas content of the effluent in the exhaust tube and providing an output signal in relation to the hazardous gas content of the effluent; and

(g) a computer controller system comprising a computer readable medium having computer readable program code embodied therein, the computer controller system capable of monitoring the output signal from the gas analyzer, and when the hazardous gas content of the effluent exceeds a safety level, performing at least one of the following:

(i) adjusting a power applied to the microwave energy applicator to reduce the hazardous gas content in the effluent,

(ii) adjusting process conditions in the process chamber to reduce the hazardous gas content in the effluent,

(iii) activating an alarm or metering display,

(iv) adding a reagent gas to the effluent before or after the effluent is energized, to reduce the hazardous gas content in the effluent, or

(v) terminating the process being conducted in the process chamber.